
CAN/ULC-S102.2 Surface Burning Characteristics of "ezoCore 25 mm"

A Report To: **Ezobord**
6845 Rexwood Road, Unit 7
Mississauga, ON, Canada
L4V 1S5

Phone: +1 226 899 0144

Attention: Tawfeek Albasha
E-mail: tawfeek@archifibe.com

Submitted by: Element Fire Testing

Report No. 22-002-228
4 Pages

Date: June 8, 2022

1.0 ACCREDITATION

ISO/IEC 17025 for a defined Scope of Testing by the American Association for Laboratory Accreditation (A2LA)

2.0 SPECIFICATIONS OF ORDER

Determine the Flame Spread Value and Smoke Developed Value based upon a single screening test only, conducted in accordance with CAN/ULC-S102.2-2018, as per Archifibe Inc. reference Purchase Order No. R1330 - Element, and Element Quotation No. 22-002-359139 dated June 1, 2022.

2.1 History of Report Revision

This is the original.

3.0 SAMPLE IDENTIFICATION (Element sample identification number 22-002-S0228)

Rigid panel material described as, "Acoustical Panel 25 mm", and identified as:
"ezoCore 25 mm"

4.0 TEST PROCEDURE

The method, designated as CAN/ULC-S102.2-2018, "*Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Covering and Miscellaneous Materials*", is designed to determine the relative burning characteristics of materials under specific test conditions. Results of less than three identical specimens are expressed in terms of Flame Spread Value (FSV) and Smoke Developed Value (SDV). Results of three or more replicate tests on identical samples produce average values expressed as Flame Spread Rating (FSR) and Smoke Developed Classification (SDC).

CAN/ULC-S102-2018 "*Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies*" is typically employed for non-flooring materials. An exception is made for thermoplastics, and other materials which melt or drip, or otherwise disintegrate and continue to burn on the floor of the test chamber. For those materials, CAN/ULC-S102.2 is specified by CAN/ULC-S102. Such is the case for this material.

Although the procedure is applicable to materials, products and assemblies used in building construction for development of comparative surface spread of flame data, the test results may not reflect the relative surface burning characteristics of tested materials under all building fire conditions.

5.0 SAMPLE PREPARATION

The test specimen consisted of a total of 12 sections of material, each approximately 25 mm in thickness by 445 mm in width by 610 mm in length. The sections were butted together to create the total specimen length. Prior to testing, the specimen was conditioned at a temperature of $23 \pm 3^\circ\text{C}$ and a relative humidity of $50 \pm 5\%$. The aqua-coloured surface was exposed during testing.

The testing was performed on: 2022-06-03

6.0 SUMMARY OF TEST PROCEDURE

The tunnel is preheated to 85°C , as measured by the backwall-embedded thermocouple located 7090 mm downstream of the burner ports, and allowed to cool to 40°C , as measured by the backwall-embedded thermocouple located 4000 mm from the burners. At this time the tunnel lid is raised and the test sample is placed along the floor of the tunnel so as to form a continuous surface and then the lid is lowered.

Upon ignition of the gas burners, the flame spread distance is observed and recorded every second. Flame spread distance versus time is plotted. Calculations ignore all flame front recessions and the Flame Spread Value (FSV) is determined by calculating the total area under the curve for the test sample. If the total area under the curve (AT) is less than or equal to 29.7 m·min, $FSV = 1.85 \cdot AT$; if greater, $FSV = 1640 / (59.4 \cdot AT)$.

The Smoke Developed Value is determined by comparing the area under the obscuration curve for the test sample to that of inorganic reinforced cement board and red oak, established as 0 and 100, respectively. The Smoke Developed Value (SDV) is determined by dividing the total area under the obscuration curve by that of red oak and multiplying by 100.

7.0 TEST RESULTS

SAMPLE: "ezoCore 25 mm"

Approx. Time to Ignition (s)	Maximum Flame Front Distance (m)	Time to Maximum Flame Front (s)	Maximum Air Temperature (°C)	Flame Spread Value (FSV)	Smoke Developed Value (SDV)
185	5.94	562	592	11	225

7.1 Observations of Burning Characteristics

The specimen ignited approximately 185 seconds after exposure to the test flame. Melting was observed prior to ignition, beginning at approximately 24 seconds.



Francis Williams,
 Technician.

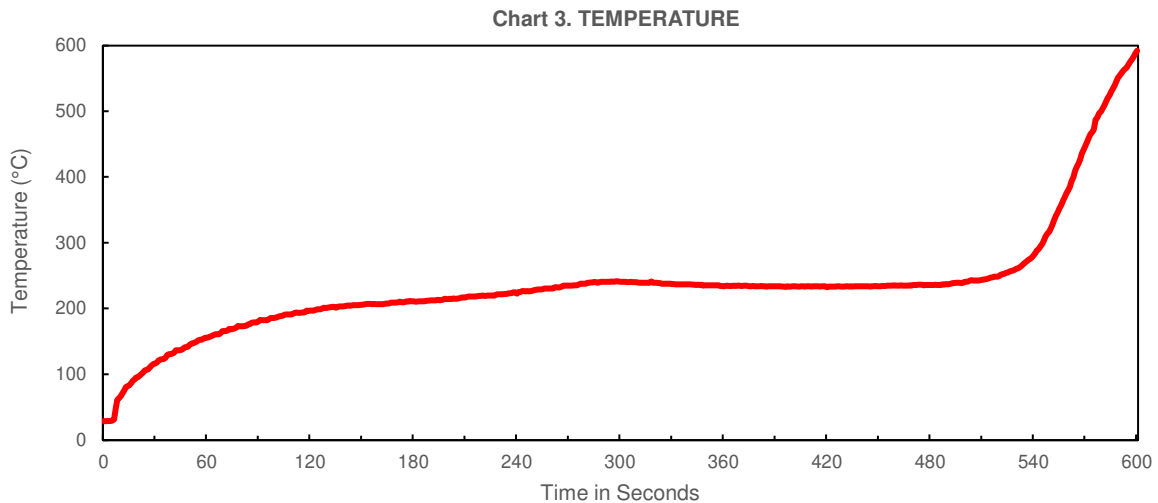
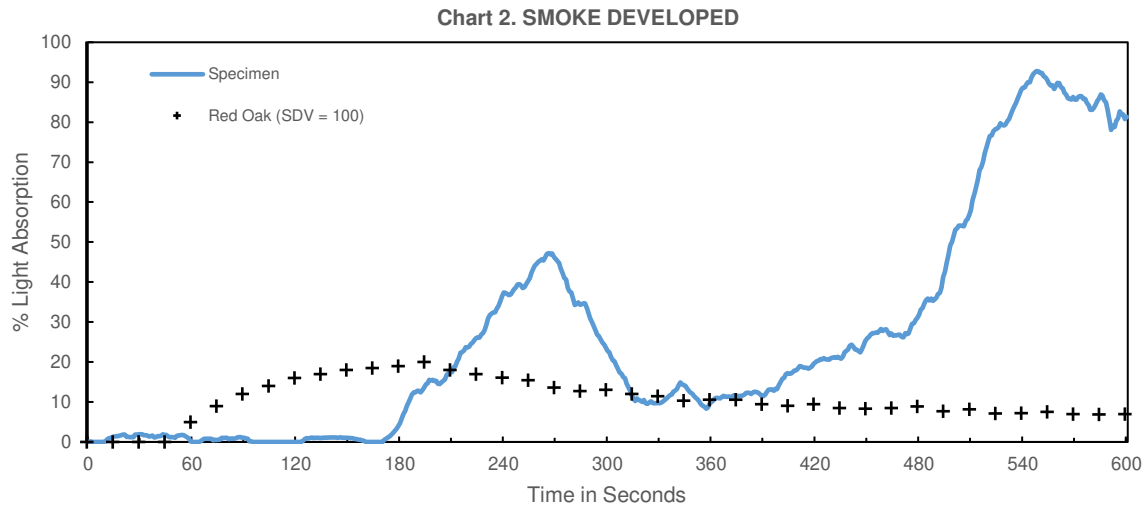
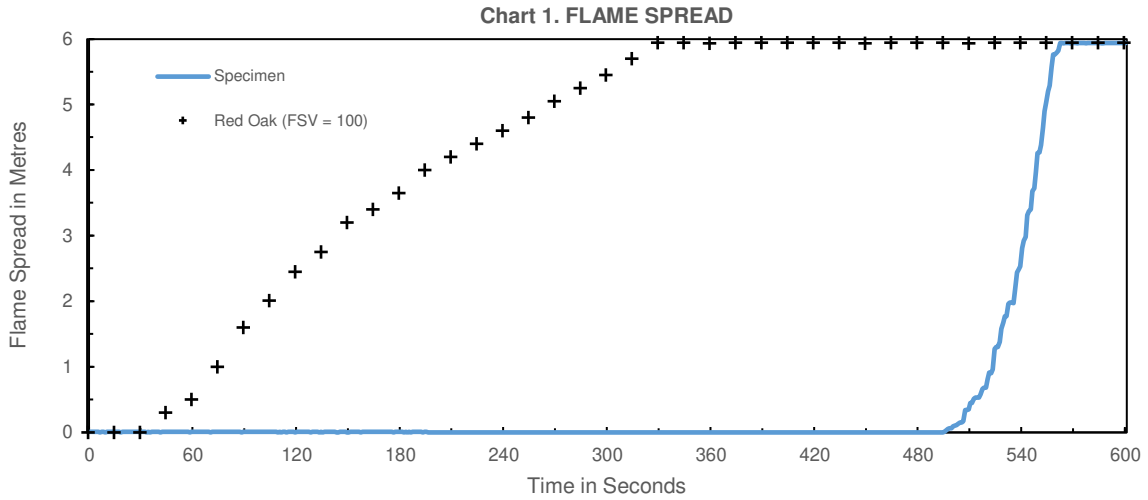


Ian Smith,
 Technical Manager.

Note: This report is related only to the sample identified and shall not be reproduced, except in full, without approval. It is covered under Element Materials Technology Canada Inc. Standard Terms and Conditions of Contract, which are accessible at www.element.com, or by calling 1-866-263-9268. CAN/ULC-S102.2 reports test results in the form of indices. As such, measurement uncertainty cannot be calculated.

9.0 TEST CHARTS

Sample: "ezoCore 25 mm"



Flame Spread Value (FSV)	Smoke Developed Value (SDV)	Maximum Air Temperature (°C)
11	225	592